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ABSTRACT

The Teaching Methods and Materials Centre of the University of Papua and New Guinea had four main objectives for 1973: (1) the collection of teaching and learning materials, (2) teacher and inservice education, (3) provision of information services for students and faculty at the university, and (4) research and curriculum development. Details are provided in this report on the development, progress, and planned activities in several subject areas: English, mathematics, science, and social science. The centre's work in information services is also described, as is the work in specific media projects. The centre's publications, reports, consultants, and staff are listed. (DGC)

ED101663

ANNUAL REPORT 1973

TEACHING METHODS AND MATERIALS CENTRE

UNIVERSITY OF PAPUA NEW GUINEA

April, 1974

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EDUCATION & WELFARE
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SUPERVISOR'S REPORT

The year 1973 was another significant period of development for the Teaching Methods and Materials Centre. There has been a restructuring of positions within the Centre and a restatement of its role as resources are being stretched to the limit in responding to the many demands made on it from inside and outside the University.

Historical Survey

Late in 1967, the Faculty of Education of the University of Papua New Guinea established the Educational Materials Centre which was designed to help combat some of the major problems in education in Papua New Guinea and other developing countries. Over the next five years the foundation Professor of Education, Ernest Roe and his colleagues, Marjorie Roe and Graham Trevaskis, fashioned a unique Centre that has contributed to the improvement of education throughout Papua New Guinea and the Pacific.

Since its inception one of the major aims of the Centre has been to increase self-awareness of teachers and improve the quality of their teaching. The Centre applied two principles in approaching this task; first, that good materials can both make

SUPERVISOR'S REPORT (continued)

good teachers better and compensate for poor teachers; and second, that the improvement and effective use of educational materials is an integral part of curriculum development. Through pre-service and in-service training programmes for students at the University and teachers already in schools, through activities associated with teachers' colleges and through basic research in the preparation and evaluation of teaching and learning materials, the Educational Materials Centre sought to contribute to the solution of practical, educational problems.

In 1970 the Centre's name was changed to the Teaching Methods and Materials Centre in order to describe its main functions more accurately. A further reappraisal of the role of the Centre in 1973 has led to the establishment of a Steering Committee to direct the overall programme, and the appointment of a full-time Supervisor, who represents the Centre on the Faculty of Education.

In 1973 the budget of the Centre was considerably reduced and many of the intentions underlying the establishment of the TMMC in terms of servicing national and international curriculum needs were necessarily curtailed. The main function of the Centre in future will be to provide support facilities for the various pre-service and in-service teacher education courses conducted by the Faculty of Education. The Centre will continue to provide an information service to schools and colleges throughout the country and will support curriculum development through the creation of materials, research and the provision of facilities for seminars and workshops. Major contributions to curriculum development will in future depend upon the secondment of staff to the Centre for specific projects.

SUPERVISOR'S REPORT (continued)

In addition to co-operating with the teaching members of the Faculty of Education, the Centre has established and hopes to maintain fruitful relationships with the Educational Research Unit which was established in 1971.

The objectives and functions of the Centre may now be summarised under the following four headings:

1. Collection of teaching and learning materials
2. Teacher and in-service education
3. Provision of an information service
4. Research and curriculum development.

Collection of Teaching and Learning Materials

A wide range of materials and equipment relevant to the levels and types of courses and programmes offered by the Faculty of Education is collected from many parts of the world: traditional and programmed texts, films, filmloops, slides, discs, tapes, maps, charts, photographs, courses of study, publishers' catalogues, journals and similar materials.

All of these represent different subjects and age levels from pre-school through to adult education, providing an overview of the range of materials used in schools throughout the world and making available to teachers in Papua New Guinea a comprehensive source of reference material.

The collection is divided into the following sections: English, Mathematics, Science, Applied Science, Social Science, Religion, Community Education in Developing Countries, Audio-Visual

SUPERVISOR'S REPORT (continued)

Materials and Equipment, Bibliographies, Catalogues, Tests and Journals. A shelf list on cards has been compiled and an information retrieval system established. The items of audio-visual equipment on display have been selected to demonstrate their possible use in different educational institutions.

The collection of educational materials and equipment forms the basis for all of the Centre's activities.

Teacher and In-Service Education

The first priority in the Centre is to assist in the training of teachers. The IMMC is a resource centre for staff and students engaged in courses requiring them to be assigned practical teaching activities. Academic staff in the Faculty of Education who are responsible for the methods, media and materials for teaching the various school subjects are permanently located in the Centre as Methods Consultants, and a Professional Assistant is attached to each. Courses are offered for the under-graduate and post-graduate training of teachers in the four major subject areas: English, Mathematics, Science and Social Science and the Professional Assistants assist the Consultants as required. Information and consultative services are provided for those engaged in the same subject areas in other teachers' colleges in Papua New Guinea. A special relationship has been established with Goroka Teachers College, the responsibility for which is now being transferred from the Department of Education to the University.

Under-graduate and graduate Education students work in schools in the Port Moresby area under the supervision of Methods Consultants,

which in turn, opens up the opportunity for in-service education to staff at these schools. In-service courses are offered for University staff, teachers already in the schools and training officers from other educational agencies.

Provision of an Information Service

The materials collected are organized to provide an information service first for staff and students of the Faculty of Education, and then for other faculties of the University and other interested institutions, groups or individuals. The Centre publishes a number of research reports, bulletins, project reports, bibliographies and lists as part of this service. Titles are detailed elsewhere in this report.

In some cases information is passed from the Centre to teachers in response to a letter or verbal request. A lending service of 16mm films in the Centre is provided and other materials are lent at the discretion of the Professional Assistants for trial and evaluation in schools. Sample displays are provided at in-service courses and conferences.

The *TMMC Bulletin* is published monthly as a supplement to the *Education Gazette* of the country's Department of Education and has the potential to reach every teacher in Papua New Guinea. Subjects are carefully selected to provide information on the latest curriculum developments, to preview recently acquired materials suitable for Papua New Guinean schools and to suggest their use in the classroom.

SUPERVISOR'S REPORT (continued)

To date, twenty-one Research Reports have been distributed on research projects conducted by Centre staff.

Research and Curriculum Development

The TMMC provides support services for projects associated with the creation, modification and evaluation of teaching and learning materials through course activities or projects supervised by individual academic staff members of the Faculty. It also acts as a curriculum research and development centre for projects associated with curriculum pilot programmes or the evaluation of existing curricula. In this area the Centre has close ties with the Curriculum Branch of the Government's Department of Education.

A major continuing project has been the development of the Secondary Social Science Project for high schools in Papua New Guinea. The Centre prepared all the materials used in the classroom in the first two years of the course and during 1973 gave support to Department of Education staff, who continued preparing Form 3 materials.

The year 1972 saw the completion of the evaluation of Phases I and II of the Primary Science Project in use in Papua New Guinea - *THREE PHASE PRIMARY SCIENCE* (Research Report No.14) and at the request of the Department the TPPS Phase III for Standards 5 and 6 is currently being evaluated.

Research work is continuing on the comparison of the language competence of L_1 and L_2 speakers of English and the investigation of levels of difficulty in written materials.

SUPERVISOR'S REPORT (continued)

With the establishment of the new Religious Studies Elective in secondary schools, Centre staff have recently been involved in selecting audio-visual materials and writing sections of the course. An intensive evaluation of the course is being planned.

A set of descriptive profile forms has been developed and found to be a suitable instrument for evaluating teaching and learning materials received at the Centre. These are used in courses to create awareness in teachers of the different aspects to be considered when selecting or creating suitable materials for use in the classroom.

Future Developments

A major continuing project for 1974 is the staff development programme for Papua New Guineans in the Centre. During 1973 the first full-time Professional Assistant was appointed. One former staff member completed his Masters Degree at the Institute of Education, University of London, returned to the Faculty as an academic member of staff and is now the Methods Consultant in Social Science. During 1974 all Professional Assistant positions will be filled by Papua New Guinean teachers, three of whom will be seconded from the Department of Education for a two-year period. They will return to the Department with valuable experience in methods, media and materials work. An Associate Supervisor is to be appointed who will assume the Supervisor's role in 1975. In a rapidly developing country the efficient training of local staff is of national importance.

The Centre continues to be financially supported solely by the University of Papua New Guinea with generous donations of materials

SUPERVISOR'S REPORT (continued)

from publishers all over the world. The income of the Centre is divided into three separate votes. In 1973 these votes were: Salaries ($40,000); Maintenance ($7,500); and Travel ($200). In the critical first years of the Centre, the University has been generous. However it is probable that, with increasing responsibilities in other directions, the funds available to the Centre in future will allow for the purchase of materials at a reduced rate. The resources of the Centre will nevertheless continue to form a broad basis for the extension of projects and curriculum-supporting materials. If sufficient additional resources can be made available the Centre expects to contribute in such areas as the development of external studies and the extension programme of the University. It could also assist with the development of materials for adult education programmes sponsored by the University in the Highlands. However, as the Faculty of Education extends its sub-graduate diploma programme, the Centre will become more involved in its major function of providing support facilities for pre-service and in-service education courses.

We believe the Teaching Methods and Materials Centre has an important role to play in the country's educational development. Our measure of success may well depend on our flexibility and readiness to respond to the needs of the country as they arise. We plan to keep in close liaison with the Government's Department of Education so that the Centre reflects the priorities of the Department at any given time. We will continue our involvement in curriculum development and research maintaining that the two must work together and cannot be separated. One emphasis will continue to be to produce and recommend inexpensive, relevant materials with an increased movement towards providing stimulus

SUPERVISOR'S REPORT (continued)

for community education inside and outside the formal education system.

However our major focus must be on the teacher himself. The quality of the teacher is paramount in any learning experience. The Centre aims to create self-awareness in teachers and open them to the potential they have to create and use materials capable of conveying the ideas to be taught in an environment they understand.

The 1973 Report has been prepared in co-operation with the Consultants and staff of the Centre and reflects the team effort involved in its continuing contribution to the educational development of Papua New Guinea.

SHIRLEY RANDELL
SUPERVISOR
TEACHING METHODS AND MATERIALS CENTRE
UNIVERSITY OF PAPUA NEW GUINEA

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DEVELOPMENT, PROGRESS AND PLANNED ACTIVITIES: ENGLISH

The English section continues to support the undergraduate methods and the diploma programmes in the teaching of English as a second language, to support developments in Papua New Guinea curriculum through the production of materials and through research and to supply information to schools and colleges on developments in their subject area.

For the future, the proposed five-year development plan for education in Papua New Guinea, published for discussion in November 1973 by the Department of Education, shows a continuing commitment to English as the language of post-primary education, but the likelihood of a change to the use of vernacular languages and/or lingue franche in primary education and in general areas of community education is clearly indicated. The Faculty of Education proposes therefore to establish a one-year diploma course in Language and Education which will help to equip officers of the Department of Education to face some of the problems involved in the implementation of these policies. This program will raise the question as to whether the English section of the Centre should continue to be called the 'English' section, or whether it should become the 'Language' section.

DEVELOPMENT, PROGRESS AND PLANNED ACTIVITIES:
ENGLISH (Continued)

In 1974, the Centre will take over the production of the journal *English in New Guinea*, which serves secondary schools and teachers colleges. Its title will be changed to *English in Papua New Guinea*.

Curriculum

Extended Reading in High Schools

This is an annotated bibliography which has been prepared jointly by the Centre and United Nations Development staff at Goroka Teachers College. The original publication and the first supplement, which was sent out to schools in 1973, cover titles from most of the series of simplified readers produced by publishers for second language medium high school students. These include stories with a background in developing countries and other stories likely to appeal to students in Papua New Guinea. It is not planned at present to produce further supplements, partly because the basic resource is now available to librarians and teachers for establishing a high school reading programme, but partly also because it is the policy of the Department of Education to purchase centrally and schools do not generally have sufficient funds to go beyond very limited purchases.

Stress, Rhythm and Intonation

The development of materials which will facilitate the teaching of the stress, rhythm and intonation of English through meaningful situations (rather than parroting) continues to prove difficult. Materials are now in trial form, and will be tested during the first part of 1974. It is hoped they will be published late in 1974.

DEVELOPMENT, PROGRESS AND PLANNED ACTIVITIES:
ENGLISH (continued)

Remedial Materials for 'common errors'

It was decided that too much simplification was involved in the development of the error cards originally planned, and the first batch of materials concerning 'words of quantity' has been sent out to schools as small booklets. In 1974, it is intended to complete the area of words of quantity and to work on verb tenses using an approach which contrasts the use of one tense with others.

Comprehension Exercises for Secondary Schools

This project is a co-operative effort between the Centre and the United Nations Development Project staff at Goroka Teachers College. Its intention is to provide materials for intentive reading which reflect the lives, culture and history of Papua New Guineans, and which will stimulate discussion. Objective and non-objective type questions have been prepared for passages designed for the lower, middle and upper secondary school, and these will be distributed in booklet form. It has proved impossible to follow through an earlier proposal to distribute sets of stencils to schools because of the expense, and the lack of facilities for reproducing the stencils.

Research

Language Ability Tests for Lower Primary School L_2 Pupils

Work has continued on the development of such tests. The length of time involved in administering the tests so far developed has prevented progress beyond the piloting stage. The intention of the Department of Education to move away from the use of English as the medium for initial education makes the practical need for these tests less pressing, though their development remains a prerequisite, in our opinion, for successful research into different methods of language teaching.

DEVELOPMENT, PROGRESS AND PLANNED ACTIVITIES:
ENGLISH (continued)

Levels of Difficulty in Reading Materials and their Effect on Comprehension and Reading Speed.

This work was undertaken in collaboration with Dr. J. Jones of the Educational Research Unit of the Faculty of Education. Two passages were prepared with four versions of each. These were tested with different groups of students. The four versions were:

(a) The original version
(b) The original content with syntax simplified
(c) The original content with vocabulary simplified
(d) The original content with both syntax and vocabulary simplified

Multiple-choice questions were prepared and the results of the four groups of students were compared in terms of speed in completing the exercise, and comprehension score. In the first experiment comprehension scores and speed improved predictably in the simplified versions. Interestingly, students working on the version with simplified syntax were significantly faster than those working on the version with simplified vocabulary. Students working on the version with simplified syntax and vocabulary were significantly faster again. However in the second study, no positive differences were shown between the groups.

Levels of Syntactic Complexity

This study compares the levels of syntactic complexity of L_1 and L_2 speakers of English at high school and at university.

DEVELOPMENT, PROGRESS AND PLANNED ACTIVITIES:
ENGLISH (continued)

The study shows, predictably, that L_1 speakers have a higher average level of syntactic complexity than L_2 speakers at both levels. However it is interesting that a considerable increase in level of complexity is shown by both groups between high school and university: i.e. language development in this area continues into and beyond the late teens; and secondly that the difference between the L_1 and L_2 groups is greater at university level than at high school level. This work will be published in a forthcoming Teaching Methods and Materials Centre Research Report.

Bibliographies

The English Section of the Centre holds bibliographies in the following areas and would be grateful for further bibliographical information:

Special English, e.g. Secretarial, Business, Science, Commercial, Engineering, etc.

Suppliers and Titles for Extended Reading for Primary schools in Papua New Guinea

Aids to Language Teaching

Composition

Comprehension

Contrastive Studies

Course Books

Dictionaries and Vocabulary Work

Films for Language Teaching

Language and Linguistics

Language Games

Language Laboratory

Literacy Teaching

Listening skills

DEVELOPMENT, PROGRESS AND PLANNED ACTIVITIES:
ENGLISH (continued)

Methodology -- Classroom Techniques
Methodology - General
Periodicals for Language Teaching
Phonology
Pidgin Materials
Problems in the L_2 Medium
Psycholinguistics
Reading Skills
Semantics
Sociolinguistics
Spoken English
Structural Exercises
Stylistics
Teachers Reference Books on Grammar Structure and Usage
Technical Engineering
Testing Bibliography

DEVELOPMENT, PROGRESS AND PLANNED ACTIVITIES: MATHEMATICS

Activity in the Mathematics Section in 1973 was limited. Student numbers were low and both the Methods Consultant and Professional Assistants worked in a part-time capacity. However valuable reorganisation was achieved in the materials held and the Centre continued to respond to outside enquiries.

In addition, work begun in 1972 on a project to circularise mathematics teachers on Mathematics Education articles in the library of the University of Papua New Guinea was carried further to the stage of production of:

A Sample Guide to articles on Mathematics Teaching available in the U.P.N.G. Library

This publication will be circulated to all high schools in Papua New Guinea.

It is hoped that the appointment in 1974 of a full-time Professional Assistant in Mathematics will allow for annotated lists of all mathematics materials in the Centre to be prepared.

DEVELOPMENT, PROGRESS AND PLANNED ACTIVITIES: SCIENCE

T.P.P.S. Phase III Evaluation

At the request of the Government's Department of Education, work begun during 1972 has continued on the evaluation of Phase III of the Three Phase Primary Science project in use in Papua New Guinea. The evaluation has developed in several directions during the year, including lesson observations, achievement testing and pupil and teacher attitude tests. The T.P.P.S. Phase III evaluation will continue during 1974 with the final report due in late 1974 or early 1975.

Lesson Observations and Achievement Testing

Lesson observations have been carried out using a specially developed, loosely-structured observation form in Port Moresby and in other parts of Papua New Guinea. Most of the observation work in Port Moresby has been carried out by the Centre's Professional Assistant in Science while that elsewhere has been undertaken by science staff of the teachers' colleges at Vunakanau, Madang, Tari and Kabaleo. Their assistance in this project is greatly appreciated.

Achievement tests for Phase III of T.P.P.S. have been constructed. These were based on the Department of Education's primary science

DEVELOPMENT, PROGRESS AND PLANNED ACTIVITIES:
SCIENCE (continued)

mastery tests which were written by a small team including the Centre's Science Methods Consultant and the Science staff of the Port Moresby Teachers College. The achievement tests were administered largely in the Port Moresby area during late 1973, utilising as far as possible those schools and classes in which lesson observations had also been carried out. It is hoped in this way to be able to relate achievement with classroom behaviour of pupils and teachers.

Following analysis of the results of these tests, considerable modification will be carried out before more extensive use is made of them in 1975. An interim report based on the lesson observations and the results of the achievement tests is being produced for publication in early 1974.

Pupil Attitudes

Two pupil attitude scales were devised and administered to Standard 6 children during 1973:

School Science Lessons designed to examine pupil attitudes to science as it is taught in school;

Science and Scientist aimed more broadly at an examination of pupil understanding of and attitudes towards science.

Pupils who had received T.P.P.S. instruction and those who had not were tested in both urban and rural environments. The results of this investigation are at present being analysed and are to be published during 1974.

DEVELOPMENT, PROGRESS AND PLANNED ACTIVITIES:
SCIENCE (continued)

Teacher Attitudes

A pilot study into the attitudes to science and science teaching of T.P.P.S. teachers and student teachers has been carried out during the latter half of 1973. Two attitude scales have been constructed, one relating to the teaching of science and the other to the nature of science. Much help has been given in this project by the staff of Vunakanau, Kabaleo, Madang and Port Moresby teachers' colleges through comments and suggestions on early versions of the test instruments and the administration of tests to their final year students. Following an analysis of the results of these trials, the test instruments have been modified and plans laid for extensive testing of teachers during 1974 and 1975. It is intended to test new college entrants at the beginning of their course and after both the first and second years. This investigation is designed to identify a change in attitudes to science and science teaching brought about by specific college courses. In addition teachers in the field will be involved and it is hoped to examine the relationships between scores on these tests and the tests on pupil attitudes and achievement.

This project is very dependent on the goodwill and enthusiasm of teachers college Science staff and the pilot project has demonstrated an encouraging willingness to assist in this study which should provide direct feedback to colleges regarding strengths and weaknesses of present college Science courses.

Material Collection and Information Services

During 1974, information gathered from various sources has led to many requests to publishers for print materials in Science and

DEVELOPMENT, PROGRESS AND PLANNED ACTIVITIES: SCIENCE (continued)

Applied Science to be deposited with the Centre. Publishers are generally very willing to do so and among the valuable acquisitions received have been the most recent additions to the Science 5/13 series. This series has been used as source material by primary teachers, secondary teachers and teachers college Science staff in Papua New Guinea. In addition, valuable contacts have been made with those involved in the African Primary Science Project enabling us to obtain at cost two excellent 16mm films for use in primary science teacher training.

Other materials of particular interest received during the year include

- *Modern Agriculture for Tropical Schools* by Cheah Kok Kheong et al
- various Department of Agriculture, Stock and Fisheries (D.A.S.F.) publications on fish, pig and cattle rearing suitable for use in the community education project
- a large inspection package of Australian Science Education Project (A.S.E.P.) materials
- additions to the *Biology for the Individual* series
- new CSE science books (human and plant biology editions)
- further English editions of Gamma films covering many scientific topics (distributed by the French Embassy, Canberra).

Publishers send materials for inspection and evaluation in addition to those requested, and all are circulated to relevant University departments for their information. Teachers are informed of new materials through the bulletins, and in reply to

DEVELOPMENT, PROGRESS AND PLANNED ACTIVITIES:
SCIENCE (continued)

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direct written requests. Much information has also been given personally to individual teachers seeking information about materials available for specific topics when they visit the Centre and also to groups of visitors, both teachers and student teachers. Two bulletins have been prepared during 1973 on Science topics. *TMMC Bulletin 83* featured recent curricular developments and *TMMC Bulletin 87* books for primary science. There were various requests from primary teachers to examine some of the materials reviewed in the bulletins and subsequent orders were made through the University Bookshop. There is a very definite need for keeping Primary Science teachers informed of simply presented, useful materials to help them with their background reading for T.P.P.S. lessons and to provide them with additional teaching ideas.

A shortened and modified report on the T.P.P.S. Phase I and II evaluation was prepared for Primary Science teachers *(TMMC Research Report 20)*. The Department of Education undertook to print and distribute this; however the unavailability of funds delayed printing until December 1973. The report contains comments on each lesson in Phases I and II with questions asked by children and difficulties encountered by teachers, making it valuable reference material for teachers in the field.

There has been much useful contact between the Science department of the University and the Teaching Methods and Materials Centre during 1973. Relevant materials have been circulated to departments for staff information and this service is valued by staff members. The Centre's Science section also co-operated with the Physics department in choosing science films suitable for the

DEVELOPMENT, PROGRESS AND PLANNED ACTIVITIES:
SCIENCE (continued)

University's Science Open Day and has assisted in providing materials and suggestions for the in-service course for T.P.P.S. teachers held for the Department of Education at the University.

To assist University departments and locality based educators in finding suitable audio-visual materials for teaching, annotated lists of Science and Applied Science materials held by the Centre have been prepared.

Separate lists were published for Science filmloops, Science filmstrips, Applied Science filmloops, Applied Science filmstrips and Science and Applied Science transparencies. These lists included basic details of each material, a short synopsis of content and a recommendation for area of use.

A card index was also prepared for 'on the spot' users comprising details of every item of audio-visual material available in Science and Applied Science in the Centre.

Annotated bibliographies of print materials held by the Centre suitable for use by science education students when preparing specific topics for practice teaching were also prepared. These covered the areas of air and air pressure, mechanics, liquid pressure, electricity and geology. A list of science books recommended as valuable resource material was published. These lists have been particularly useful to those concerned with piloting the new Secondary Science Syllabus and out of this has arisen a project for 1974 to prepare lists of recommended materials to cover the specific topics in this syllabus. Copies of the existing subject lists have been requested for distribution

DEVELOPMENT, PROGRESS AND PLANNED ACTIVITIES:
SCIENCE (continued)

by the Department of Education to high schools involved in the Pilot Secondary Science Syllabus.

DEVELOPMENT, PROGRESS AND PLANNED ACTIVITIES: SOCIAL SCIENCES

Research Projects

Stage I of a three-stage research programme for the Secondary Social Science Project was approved and financially supported by the Department of Education (Konedobu). The purpose of the first stage was to survey the organization, administration and supervision of the project in all secondary schools in the country. A questionnaire was distributed to all concerned with the project - teachers, subject co-ordinators, headteachers, regional secondary inspectors and curriculum officers. The report has been presented to the Department for its examination and review after which it is anticipated that a more detailed Stage II study will be made of the teaching of the project in classrooms of selected schools. It is expected that the recommendations of the first report may lead to a more effective use of the project in schools, especially in the areas of supply of materials, in-service training for teachers new to the subject, preparation of alternative sections, and evaluation of the project by schools. A copy of the report of Stage I of the research project will be distributed to all schools.

Several high schools were visited as part of other professional activity. These schools were: St Ignatius and Aitape (E. Sepik),

DEVELOPMENT, PROGRESS AND PLANNED ACTIVITIES:
SOCIAL SCIENCES

Yarapos and Brandi (W. Sepik), Manus and Papitilai (Manus), Mongop, Medina and Manggai (New Ireland). Informal discussions about the project were held with staff and students of the schools.

The place of the Social Science Project in Skulankas was examined as part of a team project undertaken by staff of the UPNG Department of Education looking into the role of this post-primary institution for primary school leavers.

Teaching of Social Science

Students enrolled in the basic and advanced courses of methods of teaching Social Science as part of the Bachelor of Education degree and post-graduate Diploma of Education programmes were involved in curriculum development projects for the Curriculum Branch of the Department of Education. Most of the work of students was directed toward a review of materials prepared or being prepared for Form 3 and 4 levels. This professional experience complemented the work of students in practice schools in the Port Moresby area.

It has been proposed that this kind of experience for method students be extended to include work in schools outside the Port Moresby area. Students are to be assigned to schools where a range of activities will be open to them subject to the patterns of community work of schools, student interests and expertise, and the nature of the community where schools are located. Schools should be able to benefit from classroom and individual projects undertaken by students in the course. A continuing association of students with schools should help bring valuable

DEVELOPMENT, PROGRESS AND PLANNED ACTIVITIES:
SOCIAL SCIENCES (continued)

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results from a UPNG-school relationship of this kind.

Informal and formal assistance continued to be given to Social Science staff of the practice schools used by the Faculty. Copies of materials prepared by students, for example, were left within the school for later evaluation and use by staff.

Social Science Syllabuses

A continuing association between the Faculty and Goroka Teachers College has led to regular reviews of the courses of study in Social Science and learning and teaching courses in Social Science offered by the College. There was a fruitful exchange of information and views late in the year when the Board of Studies at Goroka Teachers College was reconstituted to include larger university representation. One of the two representatives from the Faculty of Arts was an anthropologist. The discussions in this particular area proved useful for both the staff members and the College staff and led to exchange of references, materials, texts, etc.

Similar activities were carried out at Holy Trinity Teachers College, Mount Hagen, as part of the methods lecturer's responsibilities as a member of the College Board of Studies.

An overview of the teaching of Social Science at secondary and teacher training levels was made through representation of the methods lecturer on the Secondary Board of Studies and the Teacher Education Committee of the National Education Board.

DEVELOPMENT, PROGRESS AND PLANNED ACTIVITIES:
SOCIAL SCIENCES (continued)

The valuable ties between the Social Science Section of the Centre and the Curriculum Officers concerned with the development of Form 3 and 4 materials continued to the professional benefit of both groups. The resources of the Centre in the preparation of materials for these two levels were again extensively used.

Religious Studies

The involvement of the Centre in Religious Studies curriculum development increased during 1973 in response to developments in three different curriculum areas: primary, secondary and tertiary education.

At primary level, the Department of Education's adoption of the Agreed Syllabus for Christian Education for use in all primary schools in Papua New Guinea and the appointment of a full-time co-ordinator and artist in the Primary Curriculum Branch had repercussions in the Centre. The curriculum officers visited the Centre for source material, and primary school teachers began to write to the Centre for information on materials available to assist them with their lessons.

The Department of Education set up a Committee to prepare a Religious Studies Elective for Forms 3 and 4 in all secondary schools in Papua New Guinea. The Supervisor represented the Centre on this Committee which met weekly in the Centre's audio-visual room throughout the year. Several audio-visual presentations were prepared using the Centre's resources and advice.

The Centre's support facilities for University staff and Departments extended to include lecturers in Religious Studies, who

DEVELOPMENT, PROGRESS AND PLANNED ACTIVITIES:
SOCIAL SCIENCES (continued)

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were also involved in the preparation of background notes and lesson materials for the secondary elective.

The Centre has been able to attract teaching materials in the field of religious education from all over the world and publishers have been extremely generous in their response to our requests for previews. An annotated list has been prepared of all religious filmstrips available in the Centre and an annotated list of print materials useful for Religious Studies will be published in 1974. An annotated list of sources for 16mm religious films was also prepared and circulated to secondary schools and tertiary institutions in Papua New Guinea.

A survey concerning teachers and materials for high school Religious Instruction was conducted. Information was collected on high school Religious Instruction teachers' qualifications and experience and on the use of various educational media in their teaching. The data from this survey are still being analysed.

Workshops were held in the Centre for primary and secondary teachers of Christian Education and Religious Instruction in the Port Moresby area during which the use of a variety of materials available in the Centre was demonstrated.

The Supervisor was invited to present a paper outlining curriculum developments in Religious Studies in Papua New Guinea at the Biennial Commission on Christian Education of the Australian Council of Churches. It was clear from discussions with other curriculum development officers in the various states of Australia at the Conference, that progress in the area of Religious Studies

DEVELOPMENT, PROGRESS AND PLANNED ACTIVITIES:
SOCIAL SCIENCES (continued)

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at secondary level in Papua New Guinea is well advanced.

The Religious Studies Elective will be trialed in ten selected secondary schools during 1974 and the Centre will be involved in the evaluation of materials. Comprehensive tests have been prepared to assess attitudes of students before and after taking the course. These were trialed during 1973 at schools in the Highlands, New Guinea Islands and Central Districts and after refining will be used in the trial schools in 1974. Questionnaires on the effectiveness of lesson materials and background notes have also been prepared in the Centre.

TMMC Bulletin 34 described the Agreed Syllabus programme in Christian Education and *TMMC Bulletin 30* included previews of new acquisitions in the Religion and Social Science sections.

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DEVELOPMENT, PROGRESS AND PLANNED ACTIVITIES: INFORMATION SERVICES

A major part of the work of Professional Assistants in each section of the Centre is to deal with requests for information about teaching and learning materials. Correspondence from educational institutions both within Papua New Guinea and overseas continued to increase.

During 1973, the Government's Department of Education requested particular assistance in the field of community education and the Centre has written to information centres throughout the world for the latest developments in adult education, rural education, health education, agricultural extension, business and political education, and village technology. The bibliographies and materials collected in this project will be made available as annotated lists to interested persons and institutions.

Overseas visitors to the Centre have included publishers, editors, film producers, librarians, research workers, linguists, heads of Pacific Universities, United Nations and South Pacific Commission personnel. Preschool, primary and secondary teachers in the Port Moresby area and teachers and students of tertiary institutions have visited the Centre and been introduced to the services it offers. Community education curriculum officers, health educators,

DEVELOPMENT, PROGRESS AND PLANNED ACTIVITIES: INFORMATION SERVICES (continued)

adult education officers and staff from government departments have used the Centre's resource materials. The schools library officer has collaborated with staff of the Centre in preparing school libraries subsidy lists.

Displays in the Centre feature new acquisitions and special displays are mounted on request e.g. for the University's Science Open Day. Materials are available to teachers for preview and evaluation in Papua New Guinea classrooms.

The Centre's lists of publications is added to each year and information on new materials is disseminated through the *TMMC Bulletin*, lists and bibliographies. Reports on research on teaching methods and materials conducted by consultants and staff at the Centre are regularly produced and a full list of publications is given elsewhere in this report.

DEVELOPMENT, PROGRESS AND PLANNED ACTIVITIES: MEDIA SERVICES

In 1973 the Centre was without the services of an Educational Materials Officer and involvement in media projects was less than in previous years. However, the Technical Assistant continued to meet the demands of University staff and students for technical advice and was able to expand the use of closed circuit television within the University.

Teaching Activities

Individual sessions designed to familiarize students with the effective use of media in education were again conducted for various education courses offered by the Faculty of Education. Participants were advised about audio-visual equipment and used it to create teaching and learning materials.

An in-service course was conducted for laboratory trainee technicians of the Department of Biology within the Faculty of Science. The technicians were instructed in the operation of the machines available in the Centre.

Continual in-service education sessions were offered on an informal basis for new staff in the Centre and for lecturers and

tutors within the University.

Closed Circuit Television

In 1973 the Centre's VTR equipment was in greater demand and demonstrations were given to teachers, lecturers and staff of various government departments. Education Methods Consultants used the media for micro-teaching and the Department of Anthropology and Sociology for demonstrating interviewing techniques in social welfare counselling. Financial constraints have to date prevented the University proceeding with a studio room for the production of programmes.

Materials Creation

A slide/tape presentation *"A Day in the Life of a UPNG Student"* was prepared at the request of student administration for use in the University's recruitment programme in high schools throughout Papua New Guinea.

REPORTS AND PUBLICATIONS OF THE CENTRE

Research Reports

Research Report 1: *Evaluation of the World Health Organization Teaching Workshop, Papuan Medical College, Port Moresby, 1969*

Research Report 2: *Evaluation of the Extension Manual, Department of Agriculture, Stock and Fisheries, 1969*

Research Report 3: *The Tape as a Teaching and Learning Material in Nurse-Aide Training, 1969*

Research Report 4: *Teaching and Evaluation Practices in a Papuan and New Guinean High School, 1970*

Research Report 5: *Use of Direct and Indirect Questions in Materials designed for Student Use, 1970*

Research Report 6: *Interaction in a Form I Classroom of a Papuan and New Guinean High School, 1970*

Research Report 7: *A Week in the Academic Life of a Preliminary Year Student, University of Papua New Guinea, 1970*

Research Report 8: *A Technique for the Analysis of Classroom Behaviour Under Various Teaching Situations, 1971*

Research Report 9: *Report on Evaluation of Phases I and II UNICEF Primary Science Project First Interim Report, 1971*

Research Report 10: *Report on Tests of Leita Prudix Slide/Strip Projector, 1971*

REPORTS AND PUBLICATIONS OF THE CENTRE (continued)

Research Report 11:	*Report on Materials Developed by the Reserve Bank for Use in Papua New Guinea, 1971*
Research Report 12:	*Report on the Draft for a Revised Extension Manual for the Departments of Agriculture, Stock and Fisheries, 1971*
Research Report 13:	*Report on School Broadcast Survey conducted for the Australian Broadcasting Commission and the Department of Education: The Trial Survey, 1971*
Research Report 14:	*An Evaluation of Papua New Guinea's Three Phase Primary Science Project, Report on Phases I and II, 1972*
Research Report 15:	*School Broadcast Survey, 1972*
Research Report 16:	*Differences in the Performance of L_1 and L_2 Speakers in Using Stress, Rhythm and Intonation Cues of English to Disambiguate Sentences, 1972*
Research Report 17:	*Research into the Effectiveness of a Radio and Loudspeaker Combination for Schools in Papua and New Guinea, 1972*
Research Report 18:	*Three Phase Primary Science Phase III Evaluation, 1973*
Research Report 19:	*A Report on Language Problems of Tertiary Level Students Using English as a Second Language in Papua New Guinea, 1973*
Research Report 20:	*Report to Schools on Three Phase Primary Science Phases I and II for Primary Science Teachers, 1973*
Research Report 21:	*Science Teachers and Materials in Papua New Guinea High Schools, 1973*

Research Reports 1, 5, 7, 9, and 13 are now out of print.

Bulletins

Bulletin No. 29:	*Extending Experience Through the Expressive Arts*	February 1973
Bulletin No. 30:	*Extending Experience in the Classroom*	March 1973

REPORTS AND PUBLICATIONS OF THE CENTRE (continued)

Bulletin No. 31:	*Teaching about Government and Politics*	April	1973
Bulletin No. 32:	*Teaching about Concepts*	May	1973
Bulletin No. 33:	*Recent Science Curricular Developments*	June	1973
Bulletin No. 34:	*The Agreed Syllabus: a programme in Christian Education*	July	1973
Bulletin No. 35:	*Teaching the Metric System*	August	1973
Bulletin No. 36:	*Teaching about Economic Development*	September	1973
Bulletin No. 37:	*Books for Primary Science*	October	1973
Bulletin No. 38:	*The Community and the School*	November	1973

Other Publications

Improving Teacher Education: Report of a Workshop held between June 26-July 7 South Pacific Commission and University of Papua New Guinea, 1972. South Pacific Commission Convention Publications Bureau, Sydney, 1972

Political Education Project, conducted in November 1972 in association with the Constitutional Planning Committee Waigani: Teaching Methods and Materials Centre, 1972

Conflict, a Unit of Study in Social Science for Students in Primary Teacher Education, Waigani: Teaching Methods and Materials Centre, 1972

A Self-Instruction Kit - 16mm Projector Operation (Bell and Howell), Waigani: Teaching Methods and Materials Centre, 1972

How to Operate a Tape-recorder, Waigani: Teaching Methods and Materials Centre, 1972

A Handbook on the Overhead Projector, Waigani: Teaching Methods and Materials Centre, 1972

REPORTS AND PUBLICATIONS OF THE CENTRE (continued)

Planning Classroom Tests, Waigani: Teaching Methods and Materials Centre, 1972

Phoneme Discrimination, Waigani: Teaching Methods and Materials Centre, 1971

Annotated Bibliographies

Teaching About Air Pressure

Teaching About Mechanics

Teaching About Liquid Pressure

Teaching About Electricity

Teaching About Geology

Recommended Science Books

Annotated Lists

Extensive Reading in the High Schools

Extensive Reading, Supplement 1

TMMC Catalogue of 16mm films available for loan

8mm Filmloops in Science held by the Centre

8mm Filmloops in Applied Science held by the Centre

35mm Filmstrips in Science held by the Centre

35mm Filmstrips in Applied Science held by the Centre

Transparencies in Science and Applied Science held by the Centre

16mm Religious Films available for loan in Papua New Guinea

35mm Religious Filmstrips held by the Centre

35mm Filmstrips held by the Centre

8mm Filmloops held by the Centre

Lists

Agricultural Charts held by the Centre

8mm Filmloops in Science held by the U.P.N.G. Library

Sources of supply of 16mm films

REPORTS AND PUBLICATIONS OF THE CENTRE (continued)

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Audio-Visual Materials in Science and Applied Science held by the Centre

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ACKNOWLEDGEMENTS

The Teaching Methods and Materials Centre owes a great deal to the generosity of the:

makers of materials and educational equipment who continue to help the Centre;

members of Departments and Ministries of Education in other countries who continue to send samples and descriptions of their materials;

staff of materials centres and similar units in other countries who continue to give advice;

interested people with a variety of educational responsibilities in Papua New Guinea who freely give their time and skills to the Centre;

Education Department of Papua New Guinea (Primary, Secondary, Teacher Education, Technical and Educational Services Divisions);

Department of Information and Extension Services;

National Broadcasting Commission;

Library, Bookshop, Audio-Visual, Photography and Duplicating Departments of the University of Papua New Guinea.

Finally, the Centre owes its appreciation to those many persons who come from overseas to visit and assist the Centre by sharing their experiences, time and resources.

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teaching methods and materials bulletin

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TEACHING WITH PRIMARY LANGUAGE GAMES

Produced by the Teaching Methods and Materials Centre, University of Papua New Guinea

The importance of communications skills in today's world is a challenge to all teachers. Certainly primary school teachers have a unique opportunity during the early years of their pupils' lives to help them build a strong confidence in their ability to communicate. Instructional games can be used to foster such a purpose. In this bulletin several language games suitable for use in primary schools are described.

Every teacher who wo
judiciously. By sharin
knowledge.

Game time is an ideal
teacher has of a child

The language used for
children in the classroo

Throughout this bulleti
the four types predomi

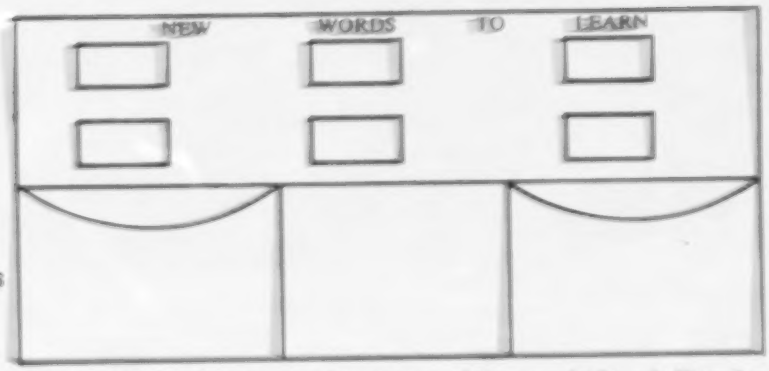
CODE

C = class activity
G = group activity
I = individual activity
M = materials need to be constructed

NOTICE BOARD WORDS II

MATERIALS: Cardboard strips on which selected words are neatly written on manuscript, and 4 inch by 6 inch cards.

DIRECTIONS: As a new unit of study is being started, the teacher arranges a classroom notice board with the caption *New Words to Learn*.



When a child has become familiar with any of these words through discussion and reading or consulting a dictionary he writes a sentence containing this word.

If the teacher decides from this that a pupil knows the word, the pupil puts his name on the back of the file card containing that new word. As names accumulate (or fail to accumulate) on these cards, the teacher should plan a discussion, or perhaps the pleasure, to read aloud to clarify concepts.

EVALUATING: The children may help one another, or while the write their sentences using the words.

The children may write sentences in the new words.

CAUTIONS: Words should be changed as the unit progresses. Only the right, worthwhile words.

MATCH ME II

MATERIALS: Pencil and paper for the children.

DIRECTIONS: Draw a design on the blackboard and tell the children you are going to write a sentence to match it, such as:

Mother packed a worst woman and the pooling looked like this.

This is a funny rose pack.

Put other shapes on the flannelboard and let the children write sentences to match them. Descriptive words such as *squiggle* and *dangle* are acceptable.

ADAPTATIONS: The children may take turns putting shapes on the board for the class. Duplicated sheets for individual work could be prepared.

CAUTIONS: Make it clear that any given design may suggest numerous interpretations.

NOISY STORY (C)

MATERIALS: A set of cards, each listing one *noise* word such as:

buzz ding-dong quack-quack croak

DIRECTIONS: Distribute one or more cards to a player. The leader, who is the first player starts to tell a *noisy story* about the noisy word that he has on his word card. Each child, in turn, adds his *noise-part* to the story then stands up. For instance the first child may start the story saying *Tomu rang the school bell and it went ding-dong*. The first child then stands up and the second child may say *The ding-dong scared a duck and it began to quack-quack*. When the entire group is standing, the leader takes a second turn and then sits. The story should be finished when all the children are seated.

ADAPTATIONS: Other groups of words such as *colour* words and *action* words may be used.

CAUTIONS: Obviously, the story could be quite a disjointed one but with practice the children will become more proficient in developing a reasonable sequence of events. This could be good game for children to play when relaxation and fun elements seem important.

GUESS WHAT IT IS (C)

MATERIALS: None.

DIRECTIONS: One child is chosen to be *it*. He thinks of an object in the room such as a table, blackboard, ceiling, carpet, etc. Then he describes it to the class, who try to guess which one. The first one to guess what he is describing gets to be *it*. (Note: with older children, the object need not be in the room.

ADAPTATIONS: The teacher might place a number of things on a table and the children could choose one of them to describe.

When a child has been *it* once he may guess again and if his guess is correct he chooses the next *it*.

CAUTIONS: Have many objects in the room that children can readily describe.

Help children develop the habit of giving accurate descriptions (this may need to be demonstrated).

LETTERS IN LINE (G)

MATERIALS: None.

DIRECTIONS: Choose three children to stand in line in front of the class. The middle one thinks of a letter and announces, *I am M*. The one on the first child's left says *I am N because I come after M*. The other child says *I am L because I come before M*. A new trio goes to the front of the room and the game continues. If the child gives an incorrect answer, he chooses someone to help him.

ADAPTATIONS: This game can also be used for numbers, days of the week, names of the months, etc.

CAUTIONS: This game will hold childrens' interest for only a short time.

WHO DID IT? (C)

MATERIALS: None

DIRECTIONS: One child, chosen to be *it*, is blind-folded. Another child is selected to be the first *pointer*. The *pointer* points to a child to come and touch *it*.

IT:	*Someone touched me.*
POINTER:	*Who did it?*
IT:	*Mary did it.*
POINTER:	*No, Mary didn't do it.*
IT:	*John did it.*

The game continues until *it* guesses the child who touched him. Both *it* and the *pointer* choose other children to take their places and the game continues.

ADAPTATIONS: Guessing chances may be limited to five turns.

Other words such as *went* and *gone*, *come* and *came*, or *give* and *gave* should be adapted for use with this game.

CAUTIONS: The teacher probably should be the first pointer in order to make the game better understood.

Seating may be re-arranged so that the children are not at their own desks.

PUPILS IMAGINATION (M)

Without the teacher's assistance pupils construct their own play materials, basing their ideas on the above game. The game may be introduced by an individual or by a group of 4-5 pupils.

SUGGESTED READING MATERIAL

● *Games, Games, Games, Songs, Stories, Rhymes, Skits, Plays, Dramatizations, Games for Parties, and Ms. Mackenzie.* Teachers Publishing Corporation, Connecticut. 1968. $4.25

This book contains a useful introductory chapter on the use of language games, constructing materials and advice on organizing games. Games range in suitability from lower primary through to lower secondary. The purpose of each game is clearly defined and teachers should have no problems in following the directions for playing the games.

● *Language Teaching Games and Contests.* W.R. Lee. Oxford University Press. 1965. $1.40

The games listed in this book were designed for foreign language learning. They are divided into sections, for example oral games, reading and writing games. An index suggests the level at which each game might be used.

● *Phonics We Use Learning Games Kit.* Lyons and Carnahan Inc. 1968. $72.45

This kit contains 10 phonic games with accompanying directions for playing and 2 teachers manuals.

The phonic games are designed to provide children with experience and drills in hearing, saying and seeing important basic elements in words. They are relevant for foreign language learning. Designed to be used in lower and upper primary classes.

Prices quoted in this Bulletin are intended only as a guide and are subject to change. Orders should be sent direct to the University Bookshop without L.P.O.'s or Money. The University Bookshop will invoice the correct amount including postage.

Further information regarding methods and materials described in this Bulletin can be obtained by writing to The Supervisor, TEACHING METHODS AND MATERIALS CENTRE, University of Papua New Guinea, P.O. Box 4828, UNIVERSITY, Papua New Guinea.